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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/082,581	05/21/1998	KENJI NAGASE	980673	2888

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EXAMINER

WHIPKEY, JASON T

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 11/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/082,581

Applicant(s)

NAGASE, KENJI

Examiner

Jason T. Whipkey

Art Unit

2612

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 28 October 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: Claim 1 has been amended to include a chopper circuit. The same was removed from claim 4.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: the arguments were not persuasive.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

DETAILED ACTION

Advisory Action

1. The period for reply ran for THREE MONTHS from the date of the final rejection. Any extension of time must be obtained by filing a petition under 37 CFR 1.136(a) accompanied by the appropriate fee. The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. A reply within the meaning of 37 CFR 1.113 or a request for a continued examination (RCE) in compliance with 37 CFR 1.114 must be timely filed to avoid abandonment of this application.
2. The amendment filed October 28, 2002, under 37 CFR 1.116 in reply to the final rejection has been considered but is not deemed to place the application in condition for allowance and will not be entered because: (a) claims 1 and 4 were amended and raise new issues that would require further search, and (b) the arguments in response to rejection of claim 4 were not persuasive.

Response to Arguments

3. Applicant's arguments filed October 28, 2002, have been fully considered but they are not persuasive.

4. In response to the rejection of claim 6, the applicant argues that MPEP §2143, which is based on *In re Vaeck*, supersedes the citation of *In re Keller*.

The examiner agrees that he must have a motivation to combine two references, as described in the *In re Vaeck* decision. However, the examiner believes he done so and he expounds on that belief in item 5 below.

Additionally, on page 8, lines 6-8, of the first amendment filed by the applicant, the applicant argues, "Sawanobori is entirely different from Iwamoto in that Iwamoto includes only the single boosting circuit whereas Sawanobori is having two power source lines thus cannot be combined with Iwamoto."

The *In re Keller* decision states that, "The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. ... Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art."

In re Vaeck and *In re Keller* are not contradictory. Rather, the citation of *Keller* was appropriate because the applicant argues that the *embodiments* of the cited art cannot be physically combined, even though the test is whether the combined *teachings* of the cited art would have suggested the applicant's invention to those of ordinary skill in the art. See MPEP §2145.

5. In order to establish a *prima facie* case of obviousness, *In re Vaeck* requires the examiner to meet three criteria, according to MPEP §706.02(j). Each will be addressed individually.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

Iwamoto shows that capacitor C_2 (and therefore terminals V_{DD} and V_{SS2} , with voltages of +5V and -5V, respectively), shown in Figure 1, may be short-circuited via switch SW_5 upon power off (column 5, lines 43-51). This eliminates a residual voltage between the terminals (column 5, lines 51-53). Consequently, the significant teaching provided by Iwamoto is that short-circuiting two output terminals of a power supply eliminates a residual voltage between the terminals.

Sawanobori shows that CCD 15 uses a power supply 15 consisting of a 15V line and a -9V line (Drawing 1). When power is lost on -9V line S3, discharge circuit 18 discharges the line to prevent "deterioration or destruction of the image pickup element due to application of a negative voltage" (constitution, lines 15-21). Therefore, the significant teachings provided by Sawanobori are: (a) that CCDs may require power supplies outputting separate positive and negative voltages, and (b) that a discharge circuit may prevent deterioration of or destruction to a CCD.

Using "knowledge generally available to one of ordinary skill in the art," a power supply, such as the one described by Iwamoto, may operate irrespective of the device to which it is attached. Additionally, CCDs may operate irrespective of the structure of the power supply to which it is connected, assuming it receives the correct voltage or voltages. Since CCDs need a power supply in order to function, which was the

Art Unit: 2612

conclusion reached by teaching (a) of Sawanobori, it would have been obvious to one of ordinary skill in the art at the time of invention to connect a CCD to a power supply.

Acknowledging the teaching of Iwamoto and teaching (b) of Sawanobori as described above, it would have been obvious to one of ordinary skill in the art at the time of invention to discharge two terminals because the discharge eliminates a residual voltage between two terminals, and a discharge circuit may prevent deterioration of or destruction to a CCD.

Second, there must be a reasonable expectation of success.

Again, using the three *teachings* described above — and not the actual embodiments shown in the art — with the knowledge generally available to one of ordinary skill in the art, there is a reasonable expectation of success.

As described above, a power supply may operate irrespective of the device to which it is attached, and CCDs may operate irrespective of the structure of the power supply to which it is connected, assuming it receives the correct voltage or voltages. Since a discharge circuit between two terminals eliminates a residual voltage between the terminals and discharging a power supply line may prevent deterioration of or destruction to a CCD, there is a reasonable expectation that the combination of Iwamoto's and Sawanobori's teachings would be successful.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.

The teachings/suggestions and expectation of success are described above.

Line 1 of claim 6 has no patentable weight. The limitations in lines 2-8 are disclosed by Iwamoto, wherein the first circuit includes voltage source 3, conductors connecting it to terminal V_{DD} , and SW5, and the second circuit includes voltage source 3, conductors connecting it to terminal V_{SS2} , and SW5. The limitations in lines 9-10 are disclosed by Sawanobori.

6. Since the examiner has established a *prima facie* case of obviousness, the rejection of claim 6 stands.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2612

9. Claim 1 recites the limitation "capacitors" on line 13. There is insufficient antecedent basis for this limitation in the claim. Only one capacitor is introduced in the claim. For examination purposes, the examiner will assume the applicant intended to include only one capacitor in the claim.

Claims 2-4 are rejected as being dependent on rejected claim 1.

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto in view of Sawanobori.

Iwamoto discloses a power supply circuit with a circuit generating a positive polarity voltage (3 and the node connecting to terminal V_{DD} ; see column 2, lines 58-64), a terminal for outputting the positive voltage (V_{DD}), a circuit generating a negative polarity voltage (3, the node connecting to terminal V_{SS1} ; see column 2, lines 58-64), and a terminal for outputting the negative voltage (V_{SS2} , when SW3 and SW4 are closed).

Iwamoto shows that capacitor C_2 (and therefore terminals V_{DD} and V_{SS2} , with voltages of +5V and -5V, respectively), shown in Figure 1, may be short-circuited via switch SW₅ upon power off (column 5, lines 43-51). This eliminates a residual voltage

Art Unit: 2612

between the terminals (column 5, lines 51-53). Consequently, the significant teaching provided by Iwamoto is that short-circuiting two output terminals of a power supply eliminates a residual voltage between the terminals.

Iwamoto is silent with regard to using the power supply circuit with a CCD imager.

Sawanobori shows that CCD 15 uses a power supply 15 consisting of a 15V line and a -9V line (Drawing 1). When power is lost on -9V line S3, discharge circuit 18 discharges the line to prevent "deterioration or destruction of the image pickup element due to application of a negative voltage" (constitution, lines 15-21). Therefore, the significant teachings provided by Sawanobori are: (a) that CCDs may require power supplies outputting separate positive and negative voltages, and (b) that a discharge circuit may prevent deterioration of or destruction to a CCD.

A power supply, such as the one described by Iwamoto, may operate irrespective of the device to which it is attached. Additionally, CCDs may operate irrespective of the structure of the power supply to which it is connected, assuming it receives the correct voltage or voltages. Since CCDs need a power supply in order to function, which was the conclusion reached by teaching (a) of Sawanobori, it would have been obvious to one of ordinary skill in the art at the time of invention to connect a CCD to a power supply. Acknowledging the teaching of Iwamoto and teaching (b) of Sawanobori as described above, it would have been obvious to one of ordinary skill in the art at the time of invention to discharge two terminals because the discharge eliminates a residual

Art Unit: 2612

voltage between two terminals, and a discharge circuit may prevent deterioration of or destruction to a CCD.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason T. Whipkey, whose telephone number is (703) 305-1819. The examiner can normally be reached Monday through Friday from 8 A.M. to 5:30 P.M. eastern standard time, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R. Garber, can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned are (703) 872-9314 for both regular communication and After Final communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to (703) 872-9314 for either formal or informal communications intended for entry. (For informal or draft communications, please label "**PROPOSED**" or "**DRAFT**".)


Art Unit: 2612

Hand-delivered responses should be brought to the sixth floor receptionist of
Crystal Park II, 2121 Crystal Drive in Arlington, Virginia.

JTW

JTW

November 14, 2002


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600